

AMENDMENTS TO THE SPECIFICATION

In the specification, in the section DETAILED DESCRIPTION OF THE INVENTION, please replace the paragraph [0028] with the presented below amended paragraph.

~~This invention provides a new method of surface plasmon resonance enhanced interactions of metal nanoparticles with biological substances that leads to increased biochemical/biophysical modifications or destruction of biological substances. In the proposed method, a biological substance located within plasmon fields of a plasmon excited metal nanoparticle undergoes enhanced interactions with the plasmon fields and/or with the metal nanoparticle. These plasmon enhanced interactions are few orders of magnitude higher than it would be interactions of the biological substance with a non-plasmon excited metal nanoparticle, and the biochemical/biophysical modifications or destruction of the biological substance can occur without the direct contact of the biological substance with the metal nanoparticle. Biological substances considered in this invention are: a biomolecule, bacteria, living tissue, cells, virus, human body, animal body, and other living biological species.~~

This invention provides a new method of a surface plasmon resonance body treatment by nanoparticles when they are contained in a human or animal body and then are excited by a plasmon source. The proposed plasmon body treatment provides much more effective treatment than only radiation treatment from the plasmon source. The nanoparticles are capable of accumulating energy from the plasmon source when they are irradiated in plasmon resonance energy bands, and thereby generate a few orders of magnitude stronger plasmon electric fields on the nanoparticle surfaces compared to electric fields typical of the plasmon source itself. These strong plasmon electric fields of embedded nanoparticles in the body interact within immediate surroundings causing desirable body responses including anti-inflammatory response. To summarize, within the scope of this invention nanoparticles are capable of generating surface

plasmon resonance electric fields, plasmon sources are capable of surface plasmon resonance to excite nanoparticles, a human or animal body contain nanoparticles, and surface plasmon resonance interactions of the nanoparticles within the body provided beneficial therapy and hygienic responses.